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(54) Title: EFFICIENT NUCLEIC ACID ENCAPSULATION INTO MEDIUM SIZED LIPOSOMES

(57) Abstract: A method for preparing liposomes containing at least one nucleic acid encapsulated therein comprising the following steps: (A) mixing a gel or a liquid containing gel particles with aqueous medium Z1 to directly form the liposomes containing the at least one nucleic acid encapsulated therein; (B) (i) mixing a gel or a liquid containing gel particles with aqueous medium Z1 to form a curd or curdy substance; and (ii) mixing the curd or curdy substance with aqueous medium Z2 to directly form the liposomes containing the at least one nucleic acid encapsulated therein; or (C) (i) cooling a gel or a liquid containing gel particles to form a waxy substance; and (ii) mixing the waxy substance with aqueous medium Z1 to directly form the liposomes containing the at least one nucleic acid encapsulated therein; wherein said gel or liquid containing gel particles comprises at least one liposome-forming lipid, at least one fusogenic lipid, a water-miscible organic solvent and the at least one nucleic acid; wherein an amount of the at least one fusogenic lipid is at least 20% by weight of a lipid content of the gel or the liquid containing gel particles; and wherein the aqueous media Z1 and Z2 are the same or different.

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